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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/543,180

01/05/2006

Stefan Deiss

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EXAMINER

MESH, GENNADIY

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/543,180	<b>Applicant(s)</b> DEISS ET AL.	
	<b>Examiner</b> GENNADIY MESH	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/24/2008</u> .  | 6) <input type="checkbox"/> Other: _____                          |



### **DETAILED ACTION**

Applicant's Amendment filed on November 4, 2008 is acknowledged.

Rejection is maintained as it set forth in previous Office Action mailed on August 4, 2008.

#### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasuo et al. (JP 06-247899) in view of Millis (US 4,327,759).

Regarding Claims 1-3 Yasuo discloses method of continuous esterefication of terephthalic acid, wherein density of slurry composed of raw materials as TPA ( terephthalic acid) and EG (ethylene glycol)l, continuously measured by densitometer ( online type device - see [0013]) in order to detect and controlling ( see [0012]) the molar ratio of ethylene glycol to terephthalic acid in the slurry, before slurry supplied to reaction zone ( see abstract) and does not rely on use of "weighing machine".

Regarding limitation of Claim 1 as "charging rate of solid raw materials" note, that density of slurry is function of molar ratio between TPA and EG and can be control by changing feeding rate of TPA or EG or both. Therefore, it is obvious to one of ordinary skill rely on adjusting rate of TPA or EG or both in order to control specific ratio between raw materials, until unexpected factual result to the contrary can be shown by Applicant.

As it was discussed above Yasuo discloses same basic process of controlling density and flow of slurry, comprising raw materials for polycondensation reaction, but not explicitly discloses automated closed-loop control process.

However, Millis teach that this closed- loop automated control process can be used in order to prepare slurry ( see abstract) wherein desirable density can be achieved.

Therefore, it would be obvious to one of ordinary skill use automated closed loop control method taught by Millis in order to obtained and control desirable density and flow of slurry in the process disclosed by Yasuo.

Regarding Claims 4, 6 and 7 Yasuo discloses that slurry flow rate also has to be measured and control ( see [0013] and [0015]) in order to accommodated "the speed of supply ...of the slurry to slurry tub".

Note, that limitation of Claim 5 as " maximum of 20 % .... of the total amount of the liquid as added after paste preparation container " satisfied by zero amount of added. Therefore, reference does not need disclose any amount of liquid added after paste ( slurry) preparation container.

### ***Response to Arguments***

2. Applicant's arguments filed November 4, 2008 have been fully considered but they are not persuasive.

Applicant's arguments related to Claims 1-8 rejected under 35 U.S.C. 103(a) as being unpatentable over Yasuo et al.( JP 06-247899) in view of Millis ( US 4,327,759)

based on statement that Yasuo does not disclose "closed-loop control of the charging rate of the solid raw material" as required by Claim 1.

As it was in rejection Yasuo in view of Millis disclose **closed loop control system** for measuring and adjustment of the density of the slurry, contained solid and liquid raw materials.

In addition note, that Yasuo ( see [0003]) pointing out that:" In order to obtain the product polymer of high quality in this direct polymerization method, it is important to fully control the rate of esterification of BHET. Although it is possible as a method of controlling an esterification reaction to make regularity the mole ratio of TPA and EG of a raw material, it is usually difficult to carry out measuring supply of the **fine-particles-like TPA with high degree of accuracy, and usually hard to remove 1 - 3% of error**".

Thus, Yasuo recognized possibility to control supply of the solid raw materials, but teach that this method could lack accuracy.

Note, "The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." In re Heck, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006,1009, 158 USPQ 275, 277 (CCPA 1968)).

A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including **nonpreferred** embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), *cert. denied*, 493 U.S. MPEP 2123.

Therefore, argument that Yasuo in view of Millis fails to disclose "closed-loop control of the charging rate of the solid raw material" is unpersuasive.

***Conclusion***

**THIS ACTION IS MADE FINAL.**

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GENNADIY MESH whose telephone number is (571)272-2901. The examiner can normally be reached on 10 a.m - 6 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272 1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gennadiy Mesh  
Examiner  
Art Unit 1796

/GM/

/Vasu Jagannathan/  
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